

WHAT IS CLAIMED IS:

1. An authentication method at a wireless LAN (local area network) system, comprising the steps of:

transmitting an authentication request from a STA (terminal station) to an AP (access point), with which said STA desires to make  
5 association;

requesting authentication of said authentication request from said AP to an authentication server, by converting said authentication request to a protocol adaptable to said authentication server;

10 checking said authentication request at said authentication server based on a MAC (media access control) address of said STA;

executing encryption authentication at said AP with said STA based on a designated encryption algorithm; and

15 notifying an authentication completion from said authentication server to said AP, after said authentication server received a response of a completion of said encryption authentication from said AP.

2. An authentication method at a wireless LAN system in accordance with claim 1, wherein:

after said encryption authentication is normally completed, a table of said MAC address in said AP is renewed by an instruction from  
5 said authentication server.

3. An authentication method at a wireless LAN system in accordance with claim 1, wherein:

in case that a trouble occurs at said authentication server, said AP itself executes authentication of said MAC address.

4. An authentication method at a wireless LAN system in

accordance with claim 1, wherein:

    said encryption algorithm uses a shared key having a predetermined usable period.

5. An authentication method at a wireless LAN system in accordance with claim 4, wherein:

    in case that said predetermined usable period of said shared key expired, said MAC address is authenticated by an open system  
5 authentication method; and

    at said open system authentication method, after association, a period of communication is limited to a designated short time, and a key is transported in said limited time by using such an Internet Key Exchange method of Public Key Infrastructure, and said authentication  
10 request is executed again by using said shared key.

6. An authentication apparatus at a wireless LAN system, comprising:

    plural STAs;

    plural APs which connect to an authentication server and said  
5 plural STAs, and one of said plural APs receives an authentication request from one of said plural STAs and converts said authentication request from one of said plural STAs to a protocol adaptable to said authentication server, and authenticates said authentication request from one of said plural STAs based on a designated encryption algorithm;  
10 and

    said authentication server which checks said authentication request from one of said STAs based on a MAC address of one of said plural STAs by receiving said converted authentication request, and notifies an authentication completion to said AP, after said  
15 authentication server received a response of a completion of encryption

authentication from said AP.

7. An authentication apparatus at a wireless LAN system in accordance with claim 6, further comprising:

a renewing means for renewing a table of said MAC address in said AP by an instruction from said authentication server, after said  
5 encryption authentication is normally completed.

8. An authentication apparatus at a wireless LAN system in accordance with claim 6, wherein:

in case that a trouble occurs at said authentication server, said AP itself executes authentication of said MAC address.

9. An authentication apparatus at a wireless LAN system in accordance with claim 6, wherein:

said authentication algorithm is a WEP (wired equivalent privacy) algorithm stipulated in the IEEE 802.11.

10. An authentication apparatus at a wireless LAN system in accordance with claim 6, wherein:

said encryption algorithm uses a shared key having a predetermined usable period.

11. An authentication apparatus at a wireless LAN system in accordance with claim 10, wherein:

in case that said predetermined usable period of said shared key expired, said MAC address is authenticated by an open system  
5 authentication method; and

at said open system authentication method, after association, a period of communication is limited to a designated short time, and a key

is transported in said limited time by using such an Internet Key Exchange method of Public Key Infrastructure, and said authentication  
10 request is executed again by using said shared key.